

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1 (currently amended). An automated method of optimising crystallisation conditions for macromolecules comprising the step of forming a crystallisation trial, the trial comprising a sample comprising:

~~(i)~~ (a) a gel forming component; and

~~(ii)~~ (b) ~~the a~~ macromolecule to be crystallised, wherein at least one component of the trial is dispensed using an automatic liquid dispensing system.

2 (currently amended). A method according to ~~Claim~~ claim 1 wherein a layer of oil is present over the sample.

3 (currently amended). A method according to ~~Claim~~ claim 2 wherein the sample and oil are dispensed from different tips of the automatic liquid dispensing system.

4 (currently amended). A method according to ~~Claims~~ claims 2 or 3 wherein the oil is dispensed first and the sample is dispensed under the oil.

5 (currently amended). A method according to any one of ~~Claims~~ claims 1 to 4 3 wherein ~~the a~~ surface onto which the gel-forming component or sample is dispensed is a greased surface.

6 (currently amended). A method according to ~~Claim~~ claim 5 wherein the grease is a high-vacuum silicone grease.

7 (currently amended). A method according to ~~Claim~~ claim 1 further comprising the steps of:

- (i) (c) incubating the sample as a drop in the presence of a first reservoir with a composition having a higher solute concentration than that of the sample; and
- (ii) (d) transferring the drop into the presence of a second reservoir with a composition having a lower solute concentration than the first reservoir by means of an automatic robot.

8 (currently amended). The method according to ~~Claim~~ claim 7 wherein the first reservoir composition is covered with a layer of oil.

9 (currently amended). A method according to ~~Claim~~ claim 2 or 8 wherein the oil layer permits diffusion from the sample.

10 (currently amended). The method according to ~~any one of either one of Claims~~ claims 1 to 9 or 7 wherein the gel-forming component is or comprises a material selected from the group consisting of agarose or tetramethyl ortho silane (TMOS).

11 (currently amended). The method of ~~Claim~~ claim 10 wherein the gel-forming component is or comprises TMOS and is at a final concentration of 0.2%.

12 (currently amended). The method of ~~any either~~ one of ~~Claims~~ claims 1 to 11 or 7 wherein the volume of sample dispensed

is less than 5 μ l.

13 (currently amended). The method of ~~Claim~~ claim 12 wherein the volume of sample is between 1.5 μ l and 2 μ l.

14 (currently amended). The method of any either one of ~~claims~~ claims 1 to 13 2 or 8 wherein the oil layer includes paraffin.

15 (currently amended). The method of any either one of ~~claims~~ claims 1 to 14 2 or 8 wherein the oil layer is a mixture of oils.

16 (currently amended). The method of ~~Claim~~ claim 15 wherein the oil layer comprises silicone.

17 (currently amended). The method of any either one of ~~claims~~ claims 1 to 15 2 or 8 wherein the oil layer consists of paraffin.

18 (currently amended). The method of any either one of ~~claims~~ claims 1 to 17 1 or 7 wherein the sample is dispensed into wells of a 1536-well microassay plate.

19 (currently amended). A method according to either one of ~~Claim~~ claims 1 to 18 2 or 8 wherein the oil layer over the sample permits vapour diffusion between the sample and the environment due to the thinness of the layer.

20 (currently amended). Use of An automated method of optimizing crystallization conditions for macromolecules comprising the step of using an automated liquid dispensing

system capable of dispensing volumes of liquid between 0.1 μ l to 5 μ l for dispensing a sample of gel-forming component and a macromolecule to be crystallized.

21 (canceled).

22 (currently amended). Use A method according to Claim claim 20 or 21 wherein the optimization includes a method according to any either one of Claims claims 1 to 19 1 or 7.

23 (currently amended). Use A method according to any one of Claims claim 20 to 22 wherein the gel-forming component is 0.2% TMOS.

24-31 (cancelled).

32 (currently amended). Use A method according to Claim claim 31 20 wherein the automated liquid dispensing system is IMPAX or Oryx 6.

33 (original). A kit of parts comprising an automated liquid dispensing system and a gel-forming component.

34 (currently amended). A kit according to Claim claim 33 wherein the gel-forming component is or comprises TMOS.

35 (currently amended). A kit according to Claim claim 33 or 34 further comprising a low density oil.

36 (currently amended). A kit of parts according to claim 33 comprising low density oil and grease.

37 (currently amended). A kit according to Claim claim 36 wherein the grease is a high-vacuum silicon grease.

38 (currently amended). A kit according to ~~Claim~~ claim 36 or 37 wherein the grease is provided on a multi-well plate.

39 (currently amended). A kit according to ~~any one of~~ ~~claims~~ claim 35 to 38 wherein the oil is paraffin.

40 (currently amended). A method, ~~use or kit~~ according to ~~any either one of the previous claims~~ claim 1 or 7 wherein the macromolecule is a biological macromolecule.

41 (currently amended). A method, ~~use or kit~~ according to ~~Claim~~ claim 40 wherein the biological macromolecule is a polypeptide.

42 (new). A method according to either one of claims 1 or 7 including the use of a material selected from the group consisting of one or more oils.

43 (new). A method according to claim 42 wherein the oil includes a material selected from the group consisting of silicone, paraffin and grease including high-vacuum silicone grease.

44 (new). A method according to claim 43 wherein the grease is provided on a multi-well plate.